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AUTHOR Hamburg, David A.
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ABSTRACT

The nuclear era has produced a horrifying possibility never before existent in human history: the world humanity and civilizations can be destroyed. It is incumbent upon the peoples of the world, and especially those of the United States and Soviet Union, to grasp the enormous and profound consequences of nuclear warfare. The emergence of Mikhail Gorbachev as the leader of the Soviet Union appears to offer an authentic opportunity for the United States to fundamentally alter relations with the Soviets, and thus to reduce the nuclear danger. This essay examines the history of U.S.-Soviet relations; ways in which Gorbachev has moved beyond previous Soviet leaders in both ideas and actions; and what the United States can do to aid major changes in Soviet behavior. It also offers guidelines for coexistence between the superpowers based upon a book entitled "U.S.-Soviet Security Cooperation: Achievements, Failures, and Lessons" (A. L. George; P. J. Farley; A. Dallin) and suggests long-term strategies for influencing Soviet policy even after Gorbachev is no longer in power. A 58-item list of references is included. (DB)

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Carnegie Corporation of New York

A Historic Opportunity to Reduce the Nuclear Danger

by David A. Hamburg

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A Historic Opportunity to Reduce the Nuclear Danger

The central fact of the nuclear era is the unprecedented destructive power of the weaponry. One bomb can take a city, one submarine a country. Never before in the long history of the human species has anything like this capability existed. In the past, no matter how ferocious the war waged, we could not destroy humanity and its civilizations if we wanted to. Now we can.

History contains countless examples of destruction wrought by human error; in recent centuries the interplay of human error with machine error has heightened the risks — and the consequences. The most vivid cases in the past decade have fortunately not occurred with nuclear weapons but with nuclear energy, namely the Chernobyl and Three Mile Island accidents. Frightening as these episodes were, they were mild compared to the explosion of nuclear weapons.

The beginning of wisdom in the nuclear era, then, is to grasp the enormous, unprecedented, profound, and pervasive consequences of nuclear warfare. This fact, together with the likelihood that sooner or later human error—a misjudgment or miscalculation brought about by the interplay of personal and mechanical foibles — will eventually occur in the arena of nuclear weapons goes a long way toward explaining the deep unease felt in the world about the adequacy of a nuclear arms race to keep the peace for the long term.

In this deadly context, the leaders of the superpowers are at once the most powerful leaders in history and, inherently, the most dangerous, pulling all of humanity into the same predicament. Can they cope with the nuclear danger? What can the rest of us do to help them?

In the past few years, the leaders have taken a great step forward by making explicit the fundamental concept that nuclear war can never be won and must never be fought. The nature and scope of military strength appropriate in the new circumstances is now undergoing reassessment. Measures are in the offing to reduce the number of weapons greatly and especially to limit their capacity for a first strike. There is greater awareness that ways must be found to decrease the chances of accidental or inadvertent nuclear war and to apply additional safeguards against unauthorized launch and serious miscalculation. Steps are being taken to

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improve basic relations between the superpowers. In the future, cooperation may even be possible in crucial matters bearing on the health and safety of humanity.

The Nuclear Predicament

But how could we have plunged ourselves into a predicament in which the existence of all humanity is totally dependent on the leadership and the computers of two great powers? What sources of distrust, even hatred, between the United States and the Soviet Union could possibly have engendered such a precarious and menacing situation?

Without being a Pollyanna about American life, I believe it is reasonable to say that the United States is not an obvious candidate for such a hostile circumstance. The nation has been blessed through most of its history with democratic traditions, extraordinary freedom and opportunity, an abundance of natural resources, and a relative paucity of serious threats to its well-being. With occasional exceptions, the prevailing national attitude from the beginning of the republic has been to steer clear of foreign entanglements and, above all, of serious international conflict. The promise of American life has been so great, and the external threats so modest, that we could afford to welcome strangers and to thrive as a nation of immigrants. With great reluctance and ambivalence, we were drawn into both World Wars. Unwisely, after World War I, we pulled back and tried to minimize our involvement in the troubles of others. By the time World War II ended, we had to face the fact that we could not withdraw to the same extent again. Yet we were hopeful that the lessons learned from the wars would make possible an unprecedented degree of international cooperation, including U.S.-Soviet cooperation.

That the Soviet Union was our ally in the last war went a long way toward muting our earlier suspicions of that nation. So it was with surprise and disillusionment that we watched Stalin's behavior in the postwar years, especially in eastern Europe. Whatever criticisms one may have of American policy in that era, just imagine for a moment what would have happened if the situation had been reversed—if Stalin had had a monopoly on the atomic bomb and we were defenseless against it.

To understand these developments requires deep knowledge of the tortured history of the Russian people — a history full of invasions and desperate wars, repressive authority, prejudice and ethnocentrism, and terrible suffering. Not least in this catalog of horrors were the deaths in World War II of 20 million Soviet people.

The Soviet regime was superimposed on many centuries of repressive authority, but it took on a very special character, indeed a lethal exacerbation, under Stalin. Stalin's atrocities were primarily directed at his own people, including much of the leadership with which he evidently had a pathologically competitive relationship, but his depredations were also directed outward. Together, his dictatorial rule, the reign of terror he inspired, and his deceitful international behavior contributed mightily to the onset of the cold war in the late forties and early fifties. Since then, starting with Khrushchev's efforts to expose some of the horrors of the Stalin period, the Soviets have tried to escape the enormous weight of Stalin's legacy—

in politics and economics and in daily life — but it has been a slow and tortuous process and is a long way from over.

Despite the bitter disappointments of the postwar years and the travails of the cold-war decades, the American people have generally been inclined to find ways to diminish the conflict and minimize the danger. Survey research indicates that, despite a high level of distaste and suspicion where the Soviet government is concerned, most people have been interested, to some degree, in negotiated settlements, in greater understanding, in finding decent ways out of the nuclear dilemma. Yet these ways have proved elusive. Periods of promise or even tangible improvement have been followed by renewed threats and deep hostilities.

As one decade followed another, there arose in each superpower an establishment that made a virtue of necessity and that in some ways seemed to thrive on the cold war. A substantial minority in each country derived economic benefits from the military, industrial, and governmental aspects of the cold war. Some in leadership positions based their self-esteem to a considerable extent on it, and a small but non-trivial number of people used hatred as an organizing principle for their lives. As a result, a sizable fraction in each society has acquired a stake in continuing the cold war at a high level of intensity. This complicates the task of farsighted leaders with humane impulses.

Then and Now: Changes Since World War II

Developments of the past few years make it possible for us to recognize how different the world is from what it was at the end of World War II. War-ravaged Europe and Japan — and the United States — not only feared the powerful Soviet military, but Soviet efforts to utilize poverty, war damage, and human suffering to subvert and gain control of governments.

Today the world is fundamentally different. Europe and Japan are dynamic and prosperous. A surge of democratic movements is evident in many countries, albeit fragile in places where there has been little experience of it. The earlier Soviet military threats and commitments to "wars of national liberation" are fading rapidly. The nations of the developing world have emerged from the era of decolonization without becoming deeply attached to the Soviet Union. The ideology of communism, in fact, has lost much of its appeal everywhere, even to some extent within the Soviet Union.

To the extent that the Soviet Union at the end of World War II looked to strong military forces and buffer zones to protect it against future invasions, any reasonable Soviet leader should recognize that this has been achieved. But the economic, political, and military costs have been very high, for the Soviet Union as well as for its rivals. And what has been gained in fundamental security? With all the vast expenditures and risks, is the Soviet Union actually more secure than it was in 1945? Probably not.

By and large, the goals set out by American foreign policy in the postwar period have been achieved. Europe and Japan have been rebuilt, enemies have been turned into friends, democracy has flourished, colonies in the developing world have been replaced by free nations, a worldwide economic system has emerged,

the Soviet Union is now seeking better relations with its adversaries. Not a perfect world by any means, but much better than it was then, and far better than it might have been.

Yet it is still a very dangerous world. In the years since World War II, there have been more than 100 wars between parties other than the United States and the Soviet Union. In any given year in the 1980s, 20 or more nations have been engaged in active military conflict. While the dramatic postwar gains in science and technology are clearly beneficial in many spheres of life such as health and agriculture, they concomitantly provide the capacity for immense increase in destructive power around the world. A multicentric world is rapidly evolving in which the ancient human proclivities toward hatred and violence can erupt into mass slaughter at any time. Some of these virulent, "high-tech" conflicts have the potential for triggering nuclear crises.

If nations feel competitive for whatever reasons, what is the reasonable way to compete under contemporary circumstances? Military strength is surely still important in a world so full of hostility — reaching far beyond the U.S.-Soviet relationship. Yet, the fundamental transformation of the world during the 20th century must be recognized. Deeply ingrained habits, familiar and largely congenial stereotypes, and deep-seated fears must be overcome.

In terms of U.S.-Soviet relations, we need the vision and courage to imagine a new and better basis for conducting our affairs. Perhaps there are ways to build institutionalized control mechanisms that would greatly reduce the risks — and above all the nuclear danger — in U.S.-Soviet relations over an extended time and across different administrations. Perhaps there are more constructive formulations of mutual security adapted to current conditions. Perhaps there are accommodative policies that would be of mutual benefit and structures to ensure that these policies are actually carried out.

Is There an Authentic Opportunity?

Gorbachev appears to differ considerably from previous Soviet leaders in his willingness to face serious domestic problems. No longer do we hear the ritual incantation of the perfection of the Soviet society and the emergence of a new Soviet man. While he retains pride in his country and some aspects of its social system, he is an extraordinarily penetrating and pervasive critic of its shortcomings. Over and over again, he calls attention to the stark reality of an unproductive economy. He is keenly aware of the contrasts of his country with those more technically advanced and with the middle-tier developing countries as well. He seems offended by the evidence around him of rigidity in thinking, deceitful practices, widespread corruption, including in the Communist Party itself, and repression.

To an unprecedented extent, he has turned to the scientific and scholarly communities to help himself understand the difficulties and to seek ways of modernizing the Soviet economy and society. Several insights have become recurrent themes in his speaking and writing: 1) The world is rapidly being transformed by advances in science and technology. 2) The consequences of nuclear war in the Soviet Union would go far beyond the great damage of World War II. 3) There is a

continuing danger of inadvertent war based on human and/or mechanical error, and the effects would be exceedingly devastating even if the war were limited to conventional forces, which is very doubtful. 4) Soviet foreign policies since the war have been unwise and in some ways counterproductive — as in the invasion of Afghanistan. 5) Decades of Soviet military buildup have imposed a serious drain of money and talent from the civilian economy.

For these and other reasons, he is inclined toward an accommodative external policy. He is apparently seeking to diminish not only the economic costs but also the political and psychological costs of continuing on the path of his predecessors. He seems keen on earning Western respect and obtaining Western expertise. He would like to gain intellectual, technical, and economic resources to modernize the Soviet Union.

To pursue an accommodative policy he must take into account certain constraints —the need to protect his core national interests and to cope with domestic politics, including the resistance of those who accuse him of giving away too much or of abandoning basic principles. The risks for him are very great, but he seems willing to take them in order to achieve major reforms in his country. Because his motivation is so strong, and the challenge so immense, there may be a historic opportunity over the next five to ten years to change Soviet-American relations in ways that could make the world a much safer place.

It is clear that Gorbachev faces formidable internal obstacles and may use up his political capital before he can make deep changes. With staying power, he will serve out a ten-year term. On the American side, it is plausible to think that the new administration will have two terms. A time span of eight years may well be enough to make substantial improvements in Soviet-American relations. It will not be easy in view of the cold-war history and the inherent complexity of the issues, but the policies of the Reagan administration in the last few years, and the relationship that developed between Reagan and Gorbachev, could nonetheless provide a bipartisan basis for exploring constructive opportunities. Leaders of other democracies, notably Margaret Thatcher, are emphasizing such opportunities.

In light of disappointments with the Soviet regime before and after the onset of the cold war, there is understandable caution in the West about how to proceed. Although there is growing and widespread consensus that an exceptional opportunity is emerging, there is less agreement on the nature of the opportunity and how we might reasonably pursue it. What do we want? Must there be certain fundamental changes in Soviet policy and practice to satisfy us? Do we want revenge? Or do we want substantially less dangerous behavior and more decent human relations?

In a very concise way, here is a first approximation of what changes in Soviet behavior we might want:

1) Accommodative external relations. This has several components: a) no military adventures; b) no ideological promotion of hatred; c) respect the security needs of other countries; d) wind down military and repressive control of the Soviet empire, especially in eastern Europe where the cold war began.

2) A decent level of human rights for Soviet citizens. This means meeting a basic

world standard for human rights and a continuation of the present trend toward increasing political, economic, and social freedom.

3) Increased openness, extending the current trend toward transparency if the Soviet Union is to become a reliable partner in international affairs.

In general terms, what can we do to facilitate such major changes in Soviet behavior? We can:

1) Adopt a constructive rather than a hateful attitude, treating the Soviets with respect where respect is earned and undertaking a problem-solving orientation toward the issues that divide us.

2) Take genuine Soviet security needs into account in negotiating agreements on arms control and crisis prevention, meeting them somewhere between their ideal wishes and ours.

3) Carefully broaden contact with the U.S.S.R., undertaking collaborative ventures where mutual benefit can be attained, seeking ways to improve basic relations.

4) Become exemplars of respectful, problem-solving behavior and expect their leaders to exemplify similar constructive orientations.

Gorbachev has earned considerable respect from American leaders, most dramatically from President Reagan, and from the American people for some of the changes he has already made. His mode of dealing with the United States and other adversarial countries is a distinct improvement on his predecessors'. He tends to be direct and civil and seeks to understand other nations; he functions mainly in a problem-solving rather than a polemical mode. (This applies both to internal problems and external relations.) He appears increasingly to recognize how very much conditions have changed over the 70-year history of the Soviet Union. He has moved towards greater openness in policy and practice.

Gorbachev's years in power have been characterized by a good deal of "new thinking." What are the concepts he is introducing? We can briefly state key ideas that show how he has moved beyond the vision of previous Soviet leaders:

1) He supports the concept of *mutual* security;

2) accepts the idea of reasonable sufficiency of military forces rather than military superiority;

3) supports scaling down to equality in military forces, asymmetrically if necessary — including accepting the appropriateness of greater Soviet than American reductions in important kinds of nuclear and conventional forces;

4) recognizes the reality of nuclear weapons and their practical unsuitability for military purposes;

5) recognizes the world's growing interdependence, militarily, economically, and environmentally;

6) recognizes the persistent risk of accidental or inadvertent war

7) recognizes the importance of modern science and technology for a flourishing economy and society;

8) recognizes the growing importance of political and economic freedom for effective modern societies;

9) supports fostering widespread innovation and creativity for the purpose of economic, political, and social reform — *perestroika* (restructuring) and *glasnost* (openness) as well as some degree of democratization; is facing problems and seeking options;

10) supports seeking ways to foster national reconciliation within Third World countries experiencing conflict.

In what spheres have tangible actions been taken that are consistent with such concepts? There is some discernible movement in most of these spheres. A few examples can briefly be given here:

1) Considerable increase in emigration; dramatic increase of expression in the press and the arts; proportionality of response in punitive measures; movement toward reform of the legal system; the first contested elections since 1917; wider scope for nationalities within the Soviet Union; some economic decentralization;

2) a drawing back from some Third World regions, most notably Afghanistan, and a tendency to facilitate regional solutions elsewhere, as in southern Africa and in Cambodia;

3) a modest loosening of the reins in eastern Europe and encouragement of reforms there;

4) arms control concessions that indicate new flexibility and even creativity in Soviet behavior: witness the Intermediate Nuclear Force (INF) agreements with their intrusive verification measures and asymmetrical reductions; the agreement to create a new and promising institution based on American ideas, the Nuclear Risk Reduction Centers in Washington and Moscow; and the commitment to significant unilateral cuts in conventional forces in Europe announced in his December 1988 speech at the United Nations;

5) the promotion of previously forbidden military-to- military contacts, including extensive exchange visits at the highest levels;

6) increase in the quality and quantity of U.S.-Soviet contacts — scientific, scholarly, economic, cultural, and political.

The United States and other democracies have tried to encourage these tendencies, both in thinking and in practice. It is reasonable to expect that serious and sustained attention will be given to additional ways in which the strong democracies can facilitate such encouraging developments. The great challenge for the years ahead will be to formulate well-founded policies and practices that could in fact strengthen and accelerate the constructive changes in Soviet behavior that Gorbachev has initiated.

Guidance from Past U.S.-Soviet Experience

What can we learn about such policies from the difficult experiences of U.S.-Soviet competition and cooperation over the cold-war decades? An important book appearing in 1988 pulled together for in-depth scrutiny the entire record of U.S.-Soviet efforts at cooperation throughout the nuclear era. Entitled *U.S.-Soviet Security Cooperation: Achievements, Failures, and Lessons*, it analyzes nearly half a century's tense experience. Certain recurrent themes and major findings emerge. The book points out that much learning and adaptation has taken place in both nations in order to keep the peace, despite deep hostility and profound strains. Some useful cooperative agreements have been reached, even in the worst of times. Although they fall far short of a comprehensive U.S.-Soviet security regime, they include a variety of norms, agreed-upon rules, evolving patterns of behavior, shared procedures, and even some specially created institutions to keep the peace and, in particular, to prevent nuclear confrontations. Through the decades of the cold war, each nation came reluctantly to recognize that the other had a sphere of dominant interests in which it could not be pushed very hard without producing great danger. Above all, direct clash of military forces was avoided as an implicit rule of prudence. In 1986 a promising step was taken with the establishment of frequent bilateral discussions of regional problems that are potential flash points. Both sides are learning how to conduct these talks in ways that are meaningful and of practical value, going beyond mutual exhortations and ritualistic assertions of grandiose national interests.

The most significant development has probably been the working out of a practical security regime for Europe. Since that is where the cold war began, and the stakes are so high there, this arrangement has surely been useful. It has been a complex, multilateral effort covering military, political, and economic aspects of relations between western and eastern Europe. Reluctantly and ambivalently, the two superpowers have come to recognize each other's security interests in Europe. This view includes an explicit recognition of the role of the United States and the Soviet Union in European security, the functional division of Europe, the division of Germany, the independence and neutrality of Austria, the independence and neutrality of Finland, the independence and neutrality of Yugoslavia, and the special status of West Berlin. Taken together, this is a considerable achievement.

More recently, there have been surprising developments in arms control, both structural (the level of forces) and functional (the way the forces are utilized). The INF treaty is the principal manifestation in the structural field. The Stockholm agreement on confidence-building measures in Europe is the principal achievement in the functional field, although the Nuclear Risk Reduction Centers should be noted as well.

Limited as they are, these accomplishments are based on several concepts to which both sides have essentially agreed—*i.e.*, parity as a criterion for regulating the level of superpower military forces; acceptance of mutual vulnerability and its associated mutual dependence; and the link between offense and defense. In a few instances, institutions have been created to implement agreements over extended time—for example, the Standing Consultative Commission to implement compliance with arms control agreements. Concepts have been agreed upon, at least in a

vaguely formulated way, to govern continuing negotiations over the long term.

With very good reason, much attention has been given to the step-by-step development of ways to implement shared interests in avoiding accidental war. One landmark in this effort is the upgrading of the hot line in 1984. The establishment of the Nuclear Risk Reduction Centers in 1987 is another. Perhaps the most remarkable and enduring landmark is the Incidents-at-Sea Agreement of the early 1970s. Dangerous encounters between the two navies, which occurred very frequently prior to this agreement, have now been moderated and constructively regulated by explicit agreement covering most though not all encounters. (Conspicuously absent from the agreement is the regulation of submarine contact.) This agreement has been pursued in a highly professional way by the two navies even during periods when the overall political relationships deteriorated badly. There is now interest in developing "rules of the road" to avoid other kinds of dangerous incidents—such as those that could occur in space.

Nuclear nonproliferation efforts provide similar experience. A multilateral arrangement has been worked out involving specific rules and institutions. Within this framework there are regular bilateral talks between the United States and the Soviet Union. Here again, U.S.-Soviet cooperation has persisted because of shared mutual interest in avoiding the worldwide spread of nuclear weapons.

A few additional agreements can only be noted in passing — to indicate the variety of cooperative efforts that were pursued even in very difficult times. These include the multilateral agreement on Antarctica; the outer space treaty involving both military and civilian utilization of space; the agreement prohibiting nuclear devices on the bottom of the ocean; and the agreement in the 1950s to establish Austria as an independent, neutral nation.

Many pieces of U.S.-Soviet security cooperation are thus in place; but there are also many obvious gaps. The greatest danger is being drawn into an unexpected, major crisis in a highly sensitive area such as Europe or the Middle East. A crisis in either place would probably be less controllable than was the Cuban Missile Crisis—itself a very dangerous episode about which a good deal of new information has recently become available.

Increasingly, therefore, the United States and the Soviet Union have come to recognize that they must manage their rivalry in ways that do not risk nuclear war or other destructive outcomes. There is growing interest in working toward a more generally cooperative, orderly, predictable, and stable U.S.-Soviet relationship, within which competition would continue and tensions would continue to arise but the nuclear danger would be greatly diminished. Competition between the rival systems for world leadership would concentrate not so much on fire power as on economic and political freedom, intellectual vitality, cultural expression, human relationships, and quality of life.

Future developments that threaten both superpowers may well strengthen the incentives for cooperation. These include the continued proliferation of nuclear weapons; the proliferation of other technologies posing grave dangers such as those involved in intermediate-range missiles, chemical warfare, and biological warfare; terrorism, especially in its technologically enhanced forms; conventional wars of great destructive power between third parties that tend to involve the

superpowers; and severe environmental degradation spreading across the northern hemisphere or indeed the entire world. Other incentives to cooperate may stem from wider economic relations and from broad scientific, scholarly, cultural and people-to-people exchanges.

Crisis Management, Crisis Prevention, and Basic U.S.-Soviet Relations

In 1978 it was my privilege to convene in Geneva, under Pugwash auspices, a workshop on crisis management and crisis prevention involving scientists and scholars from a variety of countries but principally the United States and the Soviet Union. By then there was a cumulative record of analytical studies from which one could derive some tentative conclusions about the tasks of crisis management. These studies addressed questions of utmost gravity. How is it possible to emerge from a crisis in the 20th century without a disastrous war, let alone a nuclear war? If crises were to arise again, as well they might, what principles could leaders follow in order to get out of the crisis intact?

To workshop participants it became clear that the immense strains of international crisis, and above all nuclear crisis, would test the limit of human capacity to adapt and to behave in ways that could avoid catastrophe. Whatever the level of armaments, and whatever the animosity of the superpowers, it would seem, therefore, a matter of prudent self-interest to keep back a step or two from the brink of nuclear crisis, because the tasks of crisis management are so exceedingly difficult and perhaps beyond human ingenuity in the long run. With these realizations, we shifted in the course of those several days in Geneva to a consideration of crisis *prevention*.

Crisis prevention deals with finding ways to decrease the likelihood that nuclear weapons will be used. Such efforts can be valuable in avoiding the ultimate catastrophe regardless of the level of nuclear stockpiles or the nature of U.S.-Soviet competition. Some of the main principles of crisis prevention can be stated concisely: 1) Avoid subjecting each other to nasty, unpleasant surprises; 2) reach agreements to deal effectively with predictable sensitive and potentially explosive situations; 3) clarify vital interests in touchy situations; 4) strengthen institutional mechanisms that provide professional exchange of information and ideas on a regular basis regarding issues that could readily become highly dangerous. These measures are not a substitute for arms control or for improvement in the general U.S.-Soviet relationship, but they are at least an antidote to complacency and a prudent, practical response to visible risks.

After this conference, I encouraged my principal collaborators, Graham Allison and Alexander George, to intensify contacts with Soviet scholars to follow up the ideas that emerged in Geneva. They did so with vigor and imagination. George and his collaborators pursued these ideas in their landmark book, *Managing U.S.-Soviet Rivalry*, which provided many insights into ways that a crisis prevention approach could diminish the nuclear danger.

The year 1982, when I undertook the presidency of Carnegie Corporation, was a time of severe strain in U.S.-Soviet relations. The Soviet invasion of Afghanistan in 1979 had led to a new round of the cold war. The possibility of a nuclear crisis

was vividly apparent, at least to those of us who had been working in this field. So one of my first acts after coming to the foundation was to encourage a remarkable group of scholars at Harvard University to undertake a broad-gauged, interdisciplinary project on avoiding nuclear war. In connection with that project, we formed a joint study group of U.S. and Soviet scholars on crisis prevention. With Graham Allison the chair of the U.S. group and Georgi Arbatov the chair of the Soviet group, a regular series of meetings was held alternating between the two countries. Progress was slow but worthwhile. After Gorbachev came to power, we began to explore the "new thinking," feeling our way beyond crisis prevention to consideration of basic improvements in U.S.-Soviet relations. How could such avenues be usefully explored or even facilitated by U.S. and Soviet scholars? In due course, shared experience and *glasnost* made possible a joint book, *Windows of Opportunity*, published early in 1989. To my knowledge, the book is unusual in that the papers reflect joint work by U.S. and Soviet scholars in considerable depth over an extended period of time. (Since the project began, the Soviet participants and the American participants have both become much more significant advisors to government leadership.)

Upon completion of the book, the scholars formulated a joint statement drawing on the lessons of their work for the next phase of U.S.-Soviet relations. Their study, they stated, proposes a guiding concept by which the U.S. and the Soviet Union can coexist in the coming decades: sustainable peaceful competition with the prospect of increasing cooperation. In sum, this means moving toward demilitarizing and regularizing the competition — cooperating where our interests are shared, competing in areas of value without threat of war.

In condensed form, these are the guidelines for coexistence agreed upon in the study — guidelines that are now rooted in the relationship:

1) Realism in recognizing facts; common sense in analyzing implications. If war between the United States and the U.S.S.R. were to destroy both, what would follow? A simple, common-sense approach to constrain those dimensions of competition that risk war. . . .

2) Recognition of each other — as sovereign states, as legitimate governments, as nations that have equal rights, and as coequal great powers (at least in the military dimension), which therefore shoulder a special responsibility. . . .

3) Recognition of the real differences that divide the two nations. . . .

4) Regular communication and consultation. Traditional diplomatic channels of communication have been expanded by upgraded hot lines between heads of state and regular summits that help leaders and their subordinates understand each other's views, hopes, and fears. Regular meetings between heads of state, and even more frequent discussions among secretaries of state, secretaries of defense, military chiefs, and lower levels will also help to clarify vital interests, reinforce a common understanding of constraints, and permit the identification of issues on which parallel action or agreements can advance both parties' interests.

5) Negotiation of agreements, on a case-by-case basis in a business-like manner,

which advance each party's conception of its own interests. Arms control will remain at the top of the negotiating agenda because preventing nuclear war is the overriding common interest. Steady steps to reduce risks help build a peaceful relationship in other dimensions. Agreements to limit regional conflicts, permit trade and investments, and allow greater scientific, technical, cultural, and human exchange permit each side to realize more of its own interests.

6) Establishment of institutions and procedures to make agreements operational. Bilateral institutions and procedures such as the Standing Consultative Commission and the Nuclear Risk Reduction Centers provide mechanisms for interpreting and enforcing agreements. Multilateral institutions and procedures, such as the Conference on Security and Cooperation in Europe, the International Atomic Energy Agency for nonproliferation, or the United Nations Security Council Secretary General's office for peace-keeping function, can often be even more effective in settings that engage independent interests of many sovereign states.

7) Respect for human rights at home and abroad. Building on the United Nations Charter, the Universal Declaration of Human Rights, and the Helsinki Final Act, furthering efforts to improve human rights without exaggerated publicity or propaganda and contributing to a sustainable relationship. . . .

The group also agreed upon seven key "windows of opportunity":

1) Restructuring and reducing military forces to operationalize the principles of nonuse of force, or the threat of force. . . .

2) Eliminating the capacity for surprise attack or major offensive operations (an immediate objective), by agreeing on which weapons pose the greatest threat of a first strike and eliminating them. Reducing military expenditures both unilaterally and by agreement. . . .

3) Resolving regional conflicts through consultation and cooperation. . . .

4) Preventing unintended incidents (where possible); minimizing the impact of accidents (where unavoidable). Unintended incidents like the KAL 007 shootdown could have been prevented by agreements like the North Pacific Air Safety Agreement, which was signed in its aftermath. Such agreements "on rules of the road" could reduce risks of unintended incidents in the air over other regions, in space, and in other arenas. Where accidents unavoidably happen, their impact could be minimized by thinking ahead, unilaterally and jointly, about appropriate responses—for example, to the first case of nuclear terrorism or an unidentified detonation of nuclear weapons. The Nuclear Risk Reduction Centers provide an appropriate mechanism for joint study of ways to minimize the impact of accidents.

5) Expand confidence-building measures that increase transparency, establish "trip wires" that would have to be triggered in preparation for war, and thus allow each party to base its plan for peace on the other's capacities, not just on stated intentions. Specific measures should include rigorous verification of agreements and unilateral adjustments in forces; positioning permanent international

inspectors at militarily important arms depots, airfields, fuel dumps, rail heads and perhaps even command and control centers; specific constraints on forward deployment of tanks, artillery, bridging and mine-clearing equipment, and establishment of zones and corridors free of weapons necessary for offensive military operations; and year-in-advance schedules for mobilization of forces. . . .

6) Rejecting terrorism in principle and in fact by active cooperation to combat terrorism in all its forms, including the preparation, military training, and supply of terrorists.

7) Stopping the spread of nuclear weapons, ballistic missile technology, chemical and biological weapons, and other means of mass destruction by international agreements; informal cooperation to control the supply of critical technologies; and sanctions.

Exploring Emerging Opportunities

The United States can thoughtfully explore the practical implications of Gorbachev's new thinking, not assuming that he has a grand plan worked out in rich detail, but rather that he is making serious efforts to clarify his concepts, to adapt them to contemporary reality, and to translate them into action. The democratic nations can test the extent to which he is open to a constructive interplay with them as his experience evolves. Such testing can occur in a variety of dimensions of the U.S.-Soviet relationship, including arms control, regional conflicts, human rights, and participation in international institutions.

In light of Gorbachev's views on mutual security, "reasonable sufficiency," and related matters, he can appropriately be asked to pursue a long-term accommodative arms control policy on which he has made such a constructive start. In general, he should work his way toward reducing the scale, and slowing modernization of, the Soviet military. This is not asking him to undertake unilateral disarmament or to invite occupation by Western forces. But it is asking him to indicate unambiguously that the end has come to the unremitting buildup of military forces, which has added so much fuel to the fire of the cold war. He should now be prepared to restructure his nuclear arsenals in ways that minimize the possibility of surprise attack. Among other things, this would mean eliminating the first-strike weapons that pose the greatest danger—heavy land-based missiles.

Since 1987 Gorbachev has been talking reasonably about eliminating the capacity for surprise attack and for major offensive operations. He recognizes that this will require asymmetrical reductions in conventional forces where there are imbalances. The most threatening imbalances — for example, the massive tank formations in central Europe—must be given highest priority, as he recognized in his December 1988 speech to the United Nations.

Even more quickly, it should be possible for the Soviets and Americans to strengthen confidence- and security-building measures that increase transparency and constrain dangerous military activity. Essentially this is a functional or operational approach to conventional arms control in a crisis prevention mode. It would include placing permanent international inspectors at arms depots, fuel storage facilities,

air fields, and critical railroad areas. In addition, it would provide for explicit limitations on forward deployment of equipment with threatening offensive potential such as tanks, bridging artillery, bridging and mine-clearing equipment; and it would include agreed-upon schedules for mobilization of forces, perhaps one year in advance. Additional special communications and notifications might well be appropriate to avoid nasty surprises. The central point is that it would be possible to move quickly toward a situation in which surprise attack would be virtually out of the question, even before the levels of weapons and manpower have been greatly reduced.

Beyond Gorbachev

As we look through the windows of opportunity, we must find ways to see beyond Gorbachev. What we seek is a much safer world for the long term. How can we bolster or institutionalize agreements and changes in practice so as to stabilize them across administrations in both countries? What do we need to understand about the Soviet Union in order to diminish the risk that such beneficial changes will disappear when Gorbachev goes? This is an urgent task for scientists and scholars as well as diplomats and military leaders.

Careful study of the lessons learned from hard experience in previous competition and cooperation can be helpful. But the drastic rate of world transformation creates new circumstances that must be faced by leaders in both countries. One area of experience that can be strengthened in the years immediately ahead is the establishment of institutions and procedures to make agreements operational and durable—some of which have been touched on in this essay. They include bilateral institutions and procedures, such as those of the Standing Consultative Commission and the Nuclear Risk Reduction Centers; also multilateral institutions such as the International Atomic Energy Agency for nonproliferation and the United Nation's Security Council/Secretary General's office for peacekeeping functions; the resilient Incidents-at-Sea agreement is instructive in this context as well as the recent, far-reaching verification agreements of the INF treaty. Confidence- and security-building measures in Europe could provide a major advance of the same sort. In all such cases, we need to work out patterns of interaction that become deeply embedded, highly visible, and very difficult to undermine, let alone reject, once they are well established.

For the long term, it is also useful to deepen our understanding about structural factors and recent historical changes that must influence Soviet behavior, regardless of who follows Gorbachev. An educated middle class has emerged as a major force in the Soviet society and economy. In contrast with Stalin's day, about two-thirds of the Soviet people now live in cities and are relatively well-educated. Their technical, organizational, and managerial skills are of growing importance. Moreover, this segment of Soviet society has had increased exposure to the outside world in the past two decades—and especially since Gorbachev came to power. Their impact is profound. To modernize the economic system and its technological base, the leadership must in effect negotiate a new social compact with this elite. To do so requires some recognition of the individual human person and of social

diversity going well beyond prior attitudes of the Soviet leadership.

Several factors have been identified by scholars such as Robert Legvold that are likely to influence Soviet policy regardless of individual leadership personalities:

1) The dynamism of the capitalist countries in economic and technological matters;

2) the worldwide contagion of democracy;

3) the deep problems of the developing countries and the unprofitability of most Soviet adventures in these countries since the 1970s;

4) the shift toward a multicentric world in which a variety of countries have economic and even military power;

5) world interdependence in economic, environmental, and social relations;

6) the severe limitations of nuclear weapons as military instruments in terms of actual use;

7) the widespread revulsion within and beyond the Soviet Union toward Stalinist behavior.

There is evidently widespread dissatisfaction in the Soviet Union with current conditions and a desire to achieve a better standard of living and ease the harshness of repressive government. Toward these ends, Gorbachev and other Soviet leaders are engaged in a massive effort to reform the economy and the society. One tangible manifestation is their ceaseless travel to various parts of their vast country to build support for reform. The internal demands on leadership time and energy are formidable. From this alone, it is not difficult to see why surcease from external pressures would be welcome.

For most of these purposes, the Soviet Union needs substantial, long-term contact with democracies that have the most dynamic economies and technically advanced societies. This need provides an ongoing opportunity to reinforce favorable trends in the Soviet Union. No one can accurately predict how strong this influence might become, but it does not appear to be trivial. The process will be long and tortuous. A great deal of problem-solving will have to be done, and no precise blueprint is available. The first priority in international relations must be to pursue incessantly the avoidance of massive slaughter by nuclear weapons and other dangers in a high-tech world of unprecedented destructive capacity.

In all of this, the scientific and scholarly communities have a special responsibility. They are probably the closest approximation we now have to a truly international community, sharing certain fundamental interests, values, and standards. The shared quest for understanding is one that knows no national boundaries, has no inherent prejudices, no necessary ethnocentrism, and no intrinsic barriers to the free play of information and ideas. Science can contribute to a better future by its ideals and its processes as well as by the specific findings of research. Analytical work meeting high standards of objectivity can provide the best chance to get complex facts straight on vital issues. Such efforts can be helpful to open-minded policymakers and also to a broadly informed public by clarifying the great dilemmas of our time and the policy choices bearing on them.

At present such analytical work is proceeding in the United States and the Soviet Union, especially on arms control; increasingly, there is in-depth communication between analytical groups in the two nations. As indicated, even some joint work of a collaborative nature is being done. In both countries, too, analytical groups now have reasonable access to top-level government leaders. Remarkably, on a few occasions they have had access to high-level leaders in the other country. In short, a dynamic interplay between scholars and policymakers is emerging in the United States and the Soviet Union — as well as some other nations — that could help substantially in the long run to carry out complex problem-solving in such vital areas as arms control, conflict resolution, economic development, and environmental problems.

Work to clarify paths and facilitate major changes in East-West relations that could make the world a much safer and better place will require great care and deliberation. Caution and prudence will be essential to make sure that promising changes are real and durable and that moves made with good intentions do not inadvertently become counterproductive. Concomitantly, this new era will require vision, courage, and deep insight; also willingness to conduct carefully designed experiments, monitor their progress, and make mid-course corrections. Perhaps hardest of all will be the overcoming of stereotypes, reconsideration of prejudices, and persistence in the face of difficulty over the years. People from many backgrounds and nations who have leadership responsibilities bearing on nuclear dangers will have to be capable of recognizing important changes when they occur and be flexible enough to capitalize on emerging opportunities.

As we approach the high-tech 21st century with prospects of immense benefits for people everywhere — along with unprecedented destructive capabilities — the U.S.-Soviet relationship has unique significance. The two nations have begun a process of profound intrinsic worth — major reduction of the nuclear danger. But their bilateral relationship is also important as a model of the management of international relations in adversarial situations throughout the world.

For decades this has been the quintessential international conflict. Both nations have the capacity to destroy all of humanity; they hold each other and all the planet hostage; yet they have stepped back or stayed back from the brink time and again. It is just possible that the lessons of this experience will be useful for people all over the world in coping with conflict short of mass violence. Now perhaps, the two nations are beginning to think not only of managing the conflict without disaster but even of resolving it. To the extent that there is visible movement in this direction, the world will surely notice and rejoice.

And yet, with all the technical capabilities, tangible benefits, and unprecedented opportunities available to human beings at the end of the 20th century, we are nevertheless:

1) In danger for the first time ever of extinguishing the human species in a nuclear war;

2) living in a world in which almost half the people subsist in abject poverty under crushing burdens of illness, ignorance, and disability;

3) immersed in an ancient sea of prejudice, ethnocentrism, and violence — now

amplified greatly by modern weapons and telecommunication technology;

4) generating a growing underclass of people gravely damaged for life — paradoxically set in the midst of unprecedented affluence;

5) degrading the planet's environment in ways that could have profound long-term significance.

In an age transformed by science and technology, in which international economic cooperation will be needed for prosperity and in which the capacity for destruction is so immense, these new realities should offer powerful incentives to turn away from hatred and violence.

The time has come to mobilize human talent, ingenuity, and dedication to address our fundamental problems and fulfill the potential of opportunities our ancestors never had. This peaceful mobilization will be the greatest human challenge to be met in the 21st century.

David A. Hamburg

President

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